Pauses in a translation task and perceived level of Translation Task Difficulty

Pausas em uma tarefa de tradução e percepção do nível de Dificuldade da Tarefa de Tradução

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ABSTRACT: A translation task from English into Spanish (Castilian) was carried out by 5 graduate students and 1 undergraduate student highly proficient in English and Spanish. The software Inputlog was used to record all pauses and keystrokes during the translation task. Various relations were examined in attempt to draw conclusions about cognitive effort during the translation task. The first relation examined was between self-reported L1 and Verbal Fluency Scores in L1 and L2. We predicted that participants would score higher on the Verbal Fluency Test in their L1 and found this to be true for 4 out of 6 participants. We also investigated the relation between verbal fluency score and perceived level of task difficulty. We predicted that the translation task into Spanish would be perceived as less difficult for the participants who scored higher in Spanish on the verbal fluency score. This result was only the case for one out of 3 participants who scored higher in Spanish on the Verbal Fluency Test. We also looked at the relation between degree

RESUMO: Uma tarefa de tradução, do inglês para o espanhol (castelhano), foi realizada por 5 estudantes de pós-graduação e 1 estudante de graduação altamente proficientes em inglês e espanhol. O software Inputlog foi usado para registar todas as pausas e pressionamentos de teclas durante a tarefa de tradução. Várias relações foram examinadas com o objetivo de tirar conclusões sobre o esforço cognitivo durante a tarefa de tradução. A primeira relação examinada foi entre os resultados auto-reportados da Primeira Língua (L1) e a Fluência Verbal em L1 e na Segunda Língua (L2). Nós previmos que os participantes teriam pontuação mais alta no Teste de Fluência Verbal em sua L1, acontecendo isso na verdade com 4 dos 6 participantes. Investigámos também a relação entre a pontuação do Teste de Fluência Verbal e o nível percebido de dificuldade da tarefa. Nós previmos que a tarefa de tradução para o espanhol seria percebida como menos difícil para os participantes que tiveram pontuação mais alta em espanhol na pontuação de

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of satisfaction with the target text and perceived level of task difficulty and predicted that participants who perceived the translation task as more difficult would be less satisfied with the final product. This was the case for 4 out of 6 participants. Next, we looked at total task time and total pause time, we hypothesized that variations in pause time across participants may be due to differences in L1 however the lowest and highest pause times recorded in our data were both L1 Spanish. Finally, we looked at the number of pauses and mean time of pauses at different segment levels and found results consistent with prior research where as pauses were more frequent at lower segment levels as opposed to higher segment levels. These results suggest that pauses are in fact an indicator of cognitive load during a translation task and that translating into the participant's L1 may help to alleviate some of this cognitive load.

fluência verbal. Este resultado foi apenas o caso de um em cada 3 participantes que tiveram pontuação mais alta em espanhol no Teste de Fluência Verbal. Também analisamos a relação entre o grau de satisfação com o texto alvo e o nível percebido de dificuldade da tarefa e previmos que os participantes que percebessem a tarefa de tradução como mais difícil ficariam menos satisfeitos com o produto final. Este foi o caso de 4 de 6 participantes. Em seguida, analisou-se o tempo total da tarefa e o tempo total de pausa. Por fim, foi investigado o número de pausas e o tempo médio de pausa em diferentes níveis de segmentação. Os resultados encontrados são consistentes com pesquisas anteriores, nas quais as pausas eram mais frequentes nos níveis mais baixos do segmento, em oposição aos níveis mais altos do segmento. Os resultados deste estudo sugerem que as pausas são, de fato, um indicador de esforço cognitivo durante uma tarefa de tradução e que a tradução na L1 do participante pode ajudar a aliviar parte desse esforço cognitivo.

1. Introduction

In the monolingual writing context, Schilperoord (1996) finds that pauses become longer as the segment becomes higher level. For instance, there are longer pauses between sentences than between words or clauses, and there are longer pauses between paragraphs than between sentences. On the other hand, Immonen (2006) describes how translation is distinct from monolingual text production. In her

observation, she notices that longer pauses tended to occur at levels lower than the sentence, such as at the word level, because that is where translation decisions are made during a translation process.

O'Brien (2013) also suggests that pauses and revisions can indicate cognitive effort being experienced by the translator. Lacruz, Shreve and Angelone (2014) propose that pauses of different lengths may signal different cognitive processes. They also acknowledge the variable nature of pauses, pointing to the need for a sensitive measure that can discriminate pauses of different lengths. This would allow for clusters of small pauses to be recognized as such, as opposed to being concealed as a single pause of the same cumulative duration. Following this notion, Muñoz Martín (2018) set out to try and determine if pauses shorter than 3 seconds could be associated with cognitive processes other than problem solving. The author uses inbuilt Inputlog tools to analyze keylogging with 2 seconds as the minimum threshold for a timespan to be considered a pause, with short, medium, and long pauses possible. Muñoz Martín (2018) finds that short and mid pauses did not correlate in number and length to long pauses, perhaps indicating different cognitive processes, supporting the suppositions of Lacruz, Shreve and Angelone (2014).

Jakobsen (2005) indicates that, in translation, long pauses over 5 seconds could be the prelude to a burst of creative activity, although cognitive effort and pauses do not always and directly correlate. A pause might denote cognitive activity, or, on the other hand, it might be a period of rest or a distraction. Jakobsen (2005) observed results in translation similar to those of Schilperoord in monolingual text production (1996) in that he was able to detect pauses where the norms of traditional language segmentation would anticipate them. However, Jakobsen (2005) found differences that he believes are due to the different requirements of the tasks. Therefore, the observed differences in pause activity can be accounted for as the result of the difficulties found and thus cognitive effort during a translation task. Moreover, Jakobsen (2014), who

refers to Translation Process Research (TPR) as "a special descriptive, empirical, experimental approach to Translation Studies based on close, technology-supported observation of translational (micro)behavior" concludes that "the latencies ('pauses') between such behavioral and micro behavioral manifestations in the UAD (User Activity Data) are as important cues to cognition as the recorded manifestations themselves".

Following the aforementioned research on pause activity as an indicator of cognitive effort during a translation task, we hypothesize that we will observe similar pause activity in the keylogging data in our participant's translation processes where longer pauses occur at lower segment levels. We also hypothesize that examining relations between measures to asses self-reported First Language (L1), Verbal Fluency Scores, degree of satisfaction with the target text and perceived level of difculty will enable us to further explore cognitive effort during the translation task. Specifically, we hypothesize that participants will score higher on the Verbal Fluency Test in their reported L1, than in their reported Second Language (L2). We hypothesize that participants who scored higher in Spanish on the Verbal Fluency Test will perceive the task as less difficult since the translation task is from English into Spanish suggesting that they experienced less cognitive load during the task. We hypothesize that participants who perceive the task as more difficult will be less satisfied with the target text (TT) as a result of the cognitive load they experienced during the task. Finally, we hypothesize that variations in total pause time across participants may be accounted for by differences in L1 and that this possible relation could suggest whether translating into the participant's L1 alleviates cognitive effort.

2. Methodology

For our data collection, we recruited 5 graduate students and 1 undergraduate student in the Department of Spanish and Portuguese at the University of California

at Santa Barbara (UCSB). The participants ranged in age from 21 to 40 years old and will be referred using pseudonyms in order to protect their identity: Kate, Jenny, Bob, Sophie, Andrea, and Sarah. All of the participants, except Sophie, were studying in a Literature program and ranged from first year graduate students working on their M.A. (on the way to Ph.D.) to students that were on the final phase of their Ph.D. dissertation. Sophie was the only undergraduate participant, although she was expecting to graduate in June of 2018 with a major in Linguistics. Two were native speakers of English, and four were native speakers of Spanish. All participants had a high level of Spanish and English fluency, and Jenny, Katie, Andrea and Sarah also taught undergraduate Spanish-language classes at UCSB. Most participants had previously done or were currently doing some translation work, i.e. literary text, but none were professional translators in the sense that the bulk of their time and income was from translation work.

Before starting the translation task, the participants performed a Verbal Fluency Test (VFT) in their L2. The VFT is a short assessment of verbal functioning, which normally consists of two tasks: category fluency (as known as semantic fluency) and letter fluency (as known as phonemic fluency). In the standard versions of the tasks, participants have 1 minute to produce as many unique words as possible with a semantic group or starting with a given letter. In our study, we used a modified version of this test, in that participants only had 30 seconds to produce as many unique words within each semantic group. The categories were: 1. Clothing, 2. Colors, 3. Sports, 4. Fruits, 5. Academic majors, 6. Things with wheels, 7. Vegetables, 8. Animals, 9. Countries, 10. Musical instruments. The number of unique correct words in each task (category fluency and letter fluency) is the participant's score. Therefore, the Verbal Fluency Score (VFS) is simply the total number of words that the participant could think of during the session, across each of the ten categories.

We then provided the participants with a Profile Questionnaire asking information such as their educational level, age, self-reported L1 and L2, and translation background (see Appendix A). After this, the participants translated the source text (ST) using the software Inputlog (LEIJTEN; VAN WAES, 2013). This software records keyboard and mouse movements during a writing task and allows the writing process to later be reconstructed and analyzed in a manner that is unobtrusive for the participant.

The ST was retrieved from the "The Economist" website, and each participant received the same ST regardless of their L1. It was comprised of two short passages concerning international politics with a total of 80 words, presented as follows:

> Jacob Zuma resigned as South Africa's president, the evening before a no-confidence vote was scheduled in parliament. The rand surged. Mr Zuma is beset by corruption allegations. The new president, Cyril Ramaphosa, a former union boss and tycoon, is not.

> Morgan Tsvangirai died from cancer, aged 65. He led the opposition to Zimbabwe's Robert Mugabe even after regime thugs tried to throw him off a tall building. He won a presidential election in 2008, but Mr Mugabe won the count.

The translation task was not timed, and the participants were encouraged to translate the ST at their own pace. The participants were allowed to use online dictionaries, but they could not machine translate the text using online translation services such as Google Translate and post-edit the output.

After the translation was completed, the participants filled out a brief post-translation questionnaire (see Appendix B). Finally, a Verbal Fluency Test was administered in the participant's L1, which was recorded and later scored along with the Verbal Fluency Test in their L2. The two VFTs were administered separately to avoid the potential for a priming effect, in which ideas prompt other ideas later on

without an individual's conscious awareness. In other words, the spontaneous generation of words in each category in the participant's L1 could have been compromised since they would have just been exposed to the semantic categories while doing the VFT in their L2. After the second VFT, each participant was thanked and dismissed.

3. Results and Discussion

This section presents results of the following variables:

- Self-Reported L1 and VFS in L1 and L2
- VFS and Perceived Level of Task Difficulty
- Degree of Satisfaction with the Target Text and Perceived Level of Task Difficulty
- Total Task Time and Total Pause Time
- Number of Pauses and Mean Time of Pauses

3.1. VFT, Perceived Level of Task Difficulty and Degree of Satisfaction with the Target Text

We expected the VFS to tend to be higher in the participant's L1, however this was not the case for all participants. While Bob, Andrea, Sarah and Kate exhibited the predicted tendency to perform better in the VFT in their L1, Sophie scored significantly higher in her L2 and Jenny scored about the same in both L1 and L2.

Table 1 -- Self-Reported L1 and VFS in L1 and L2.

Participant	L1 (Self-Reported)	Verbal Fluency Total Score (L1)	Verbal Fluency Total Score (L2)
Kate	English	145	111
Jenny	Spanish	94	90
Bob	English	118	76

Sophie	Spanish	108	162
Andrea	Spanish	112	101
Sarah	Spanish	125	106

Source: elaborated by the authors.

Jenny, whose L1 is Spanish, scored 94 in Spanish and almost the same score in English, 90. Sophie scored 108 in her L1, Spanish, and 162 in her L2, English. This deviation from the expected results could perhaps be a sociocultural issue. How people identify "their" L1 can be tied up in concepts of culture and belonging, so we suspect that self-reporting is not a truly reliable method since it is susceptible to these biases[2]. For example, in the Profile Questionnaire (see Appendix A), Sophie commented that, although Spanish is her L1, her English abilities are stronger not only because she has been studying English since she was 6 years old, but also because she has only recently begun using Spanish in a formal academic setting. She also noted that she has never lived in a Spanish-speaking country. In our opinion, it is probable that Sophie's English abilities are stronger in an academic setting (which places greater emphasis on reading and writing), but how about speaking and listening abilities? Including measures of language proficiency for both English and Spanish would have allowed us to further analyze this stimulating result.

This introduces a new dimension of difficulty in defining one's L1 because it is possible that the participant's self-reported L1 may not be their dominant language. Moreover, some of the participants were calm during the Verbal Fluency Test while others showed signs of anxiety and hesitation, perhaps affecting their Verbal Fluency Score.

3.2 VFS and Perceived Level of Task Difficulty

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[2] Even national census polls have this issue since they usually rely only on self-reported values.

No attempt was made to rate the quality of the translation product, but the participants were asked to indicate their degree of satisfaction with the final translated TT using a Likert scale in a post-translation questionnaire (see Appendix B).

Table 2 -- Perceived Level of Task Difficulty and VFS.

Participant	Perceived Level of Task Difficulty	Verbal Fluency Total Score (L1)	Verbal Fluency Total Score (L2)
Kate	4	145	111
Jenny	4	94	90
Bob	4	118	76
Sophie	3	108	162
Andrea	4	112	101
Sarah	3	125	106

Source: elaborated by the authors.

We expected the task to be perceived as less difficult for the participants who scored higher on the VFT in Spanish since the translation task was from English into Spanish. However, this was only the case for one participant, Sarah, out of 3 participants who scored higher on the VFT in Spanish: Sarah, Andrea and Jenny. Therefore, when looking at the perceived level of task difficulty and the VFS, we did not find any correspondence.

3.3 Degree of Satisfaction with the TT and Perceived Level of Task Difficulty

The next relation we examined was the degree of satisfaction with the TT and the perceived level of task difficulty. We predicted that participants who perceived the translation task as more difficult would be less satisfied with the final product. This was the case for 4 out of 6 participants.

Table 3 -- Perceived Level of Task Difficulty and Degree of Satisfaction with the TT.

Participant	Perceived Level of Task Difficulty	Degree of Satisfaction with the TT
Kate	4	3
Jenny	4	4
Bob	4	3
Sophie	3	2
Andrea	4	3
Sarah	3	3

Source: elaborated by the authors.

Jenny rated the task difficulty as a 4 as well as her satisfaction with the TT. Interestingly, Sophie thought the translation task was less difficult than the other participants, but she was also the least satisfied with her translation product. It is relevant to note that Sophie was also the most novice translator of the group, which may account for her lack of confidence in her final TT.

The values for perceived level of task difficulty were all very similar. One possible reason for this is that aspects of the data collection may have had an impact on the translation process causing the participants to find the task more difficult. Since the software Inputlog needed to be previously installed on the computers where the translation task would be carried out, participants were not able to use their own computers. Thus, the computers may, or may not, have had the software language keyboard that each of the participants were used to. This may have caused an impact on the collected data, especially due to the typing of diagrammatic marks and special characters, such as ñ and ¿, in Spanish, the target language. The unfamiliar keyboard may have caused an increase in technical effort (LACRUZ *et al.*, 2014), defined as the work it takes to maneuver the mouse and type, which may have led to an increased

number of typos during the translation task and to errors in the final TT, which were not evaluated in this study.

Muñoz Martín (2018) suggests a reciprocal relationship between typos and cognitive effort, in which the first one may affect or be affected by the second one. From this relation, we may suggest that the participants' ratings of the task difficulty could have been, at least partially, influenced by the unfamiliar keyboard that they used during the translation task, which could also have led them to take more time to complete the task.

Another variation in the data collection procedure across participants was that the dictionaries used by the translators were not controlled. Some participants used a separate browser on the same computer, and in this case, their activity was recorded by the software Inputlog, providing us with information as to which websites they visited and for how long they remained on the given webpage. However, for those who used a smartphone or separate computer to look up a term, we were unable to gather such specific data. In such cases, Inputlog was only able to record that a pause occurred, without further information, and it is likely that switching between devices led to longer pause times than may have occurred otherwise. Since there was such variability in dictionary use across participants, we were unable to investigate potential rich points in the ST or the number of consultations to external sources as indicators of the level of difficulty of the task to later be compared to self-reported perceived level of difficulty.

3.4. Total Task Time and Total Pause Time

To perform the analysis of cognitive effort, the minimum pause threshold was set at 2 seconds, as done by Muñoz Martín (2018). As the table 3 shows, the participants took between 483 seconds and 1136 seconds to complete the translation task. Moreover, the mean time for the total task time was 922.5 seconds, and the mean time

for the total pause time was 490.66 seconds. The aggregated pause time ranged from 286 seconds (Sophie) to 687 seconds (Jenny), which is interesting as Sophie and Jenny both reported Spanish as their L1. Apparently, this wide variation in total pause time does not reflect different L1s as we hypothesized, perhaps it is just showing that different participants work differently, and that experience in translation is an important factor in this context. Remarkably, Jenny and Sophie were also the only participants whose total pause time was greater than half of the total task time. Jenny spent more total time paused (116 seconds), rather than writing, as did Sophie (44 seconds). Conversely, Kate spent a total of 47 seconds longer writing, rather than paused, as did Bob (41 seconds), Sarah (28 seconds) and Andrea (4 seconds).

Table 4 -- Total Task Time and Total Pause Time in Seconds.

	Total Task Time (in seconds)	Total Pause Time (in seconds)
Kate	948	447
Jenny	1136	687
Bob	1057	580
Sophie	483	286
Andrea	974	483
Sarah	937	461
Mean	922.5	490.66

Source: elaborated by the authors.

3.5. Number of pauses and mean yime of pauses

By analyzing the number of pauses longer than 2 seconds before, within and after words, and before and after paragraphs and sentences, we observed that the average number of total pauses across all participants was higher within words (124.17), followed by pauses before words (64) and after words (43.5), while pauses before paragraphs (9), after sentences (5.5), before sentences (5.5), and after paragraphs (.33) were the lowest in number. These results are consistent with our hypothesis and the prior research on pause activity in translation task (IMMONEN, 2006, p. 333-4),

indicating, as Immonen (2006) suggests, that cognitive effort was due to translation decisions made at lower segment levels as opposed to language production and organizational activities required in monolingual writing, in which case pauses occur at higher segment levels.

Table 4 -- Number of pauses and mean time of pauses in seconds of pauses within words, before words, before sentences and before paragraphs.

	Pauses within words		Pauses before words		Pauses before sentences		Pauses before paragraphs	
	Number	Mean	Number	Mean	Number	Mean	Number	Mean
Kate	135	40	47	67	4	44	13	34
Jenny	131	92	69	85	7	46	1	41
Bob	120	38	71	61	3	40	16	50
Sophie	112	33	79	79	8	54	7	41
Andrea	116	46	67	91	5	46	10	43
Sarah	131	39	51	99	6	42	7	45

Source: elaborated by the authors.

The longest mean times for pauses were before words (99 seconds) across all the participants. This mean pause time is possibly an indicator of cognitive effort when the participants engaged in a decision-making process before translating a word.

Table 5 -- Number of pauses and mean time of pauses in seconds of pauses after words, after sentences and after paragraphs.

	Pauses after words		Pauses after sentences		Pauses after paragraphs	
	Number	Mean	Number	Mean	Number	Mean
Kate	28	39	5	27	1	62
Jenny	46	51	7	55	0	--
Bob	69	55	4	50	1	96
Sophie	32	91	6	65	0	--
Andrea	40	53	6	55	0	--
Sarah	46	53	5	29	0	--

Source: elaborated by the authors

The second longest mean time was after words (91 seconds), possibly serving as an indicator of cognitive effort being made to assess the efficacy of the chosen word

in its context. As the participants were not professional translators, these results showing a word-level orientation are consistent with previous studies (IMMONEN, 2006). One would expect to see professional translators pausing longer at higher-level constructs like a phrase, sentence or paragraph and chunk longer segments while the non-professional translators would tend to stay longer at the word level, as observed by Jakobsen (2005) in his investigation of optimal translation performance.

Furthermore, the participants whose L1 was Spanish chunked much longer segments in the translation task from English into Spanish. For instance, Jenny remarkably typed the following chunk without a single pause that exceeded the 2-second threshold:

> [pause] te de Sur Africa, antes de que se programará el voto de censura en el parliamento. El rand aumentó. El señor Zuma ha sido acusado por corrupción. El nuevo presidente Cyril Ramaphosa, anteriormente era el líder de la union y un magnate, no lo es. ··Morgan Tsvangirai murió de cancer a los 65 años. Él guió a la oposición a [pause]

No participant who had English as their L1 even came close to this large of a chunk in Spanish, suggesting that working into one's L1 enables stretches of performance where less cognitive effort is required.

Another reason to suggest that working into one's L1 is less cognitively demanding is that another native Spanish speaker, Sophie, was able to complete the task in 483 seconds, as Table 4 shows, 465 seconds faster than the next quickest participant, Kate, with a total time of 948 seconds. Sophie was also one of the two participants who rated the difficulty of the task as neutral (3), according to the Likert scale. The remaining participants rated the task as more difficult (4). Jenny's long chunk and Sophie's relative speed point to a potential advantage of translating into one's L1.

4. Final Remarks

This study aimed to investigate perceived level of the translation task difficulty, the degree of satisfaction with the final target text, and the duration and number of pauses in a translation task from English into Spanish to draw conclusions about cognitive effort when translating into L1 or L2. By translating a ST comprised of two passages with a total of 80 words, concerning international politics, we found interesting results regarding self-reported L1 and VFS in L1 and L2, VFS and perceived level of task difficulty, degree of satisfaction with the TT and perceived level of task difficulty, total task time and total pause time, as well as the number and mean time of pauses.

The greater frequency and duration of lower level segment pauses seem to accurately reflect the cognitive activity required in the translation process, in which more cognitive effort is required in making lexical and grammatical decisions. This observation highlights the cognitive processes that are involved in translation and are distinct from monolingual writing. For each participant, total pause time accounted for nearly half of the total task time. This result suggests that total pause time may serve as an indicator of cognitive effort.

In future studies, restricting the participant's usage of dictionaries to only webpages on the same computer where the translation task is being carried out would reduce variability and allow for a more controlled approach to gathering keylogging data. Further investigation of pause activity as an indicator of cognitive effort would also benefit from data triangulation (ALVES, 2003) in order to lead to more accurate results and conclusions. Moreover, a significantly larger sample size should be taken in a future study since generalizations cannot be made from small samples. Therefore, a more controlled method of data collection along with a larger sample size should provide future researchers the ability to draw more consistent results.

Another aspect that needs further investigation is how to determine each participant's L1 and L2 using other methods other than self-reporting. For instance, Sophie self-identified her L1 as Spanish but noted that she has never lived in a Spanish speaking country. Additionally, Jenny moved to the U.S. when she was three years old but self-identified her L1 as Spanish. For both Sophie and Jenny, phonetically Spanish is their L1, but Jenny's Verbal Fluency Score was almost equal in Spanish and English while Sophie's Verbal Fluency Score clearly revealed an English dominance, leading to the question: How do people identify their L1? Do people identify their L1 based on cultural factors and not dominance? Marinova (2000) even questions the existence of a so-called "critical period" that ends at or before puberty, generally stating that researchers have made the same erroneous generalizations as the general public about the very concept of a L1 and L2. Sophie's relative speed in completing the task, as well as the long chunk of text Jenny was able to translate suggest that they may have benefited from translating into their L1. However, a distinction between the L1 as the first language acquired, or as the dominant language, is necessary in order to draw more substantial conclusions in regard to relative cognitive effort while translating into an individual's L1.

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APPENDIX A - PROFILE QUESTIONNAIRE

Date: 2018 /_____/_____   **Participant** # _____

Please answer truthfully the following questions (you can add whatever comments you might have, either next to the questions or at the end of the questionnaire):

Nationality: _____
Date of Birth: _____
Sex: _____ Female _____ Male _____ Other _____

1. Do you have a bachelor's degree, a college degree or equivalent?
( ) Yes

( ) No **(go to question 8)**

2. In what area did you graduate in college:
Please be specific: _____

3. Where?
( ) U.S.A.
( ) Other - Please specify the country: _____

4. Did you attend graduate school?
( ) Yes
( ) No

5. If yes, where did you attend graduate school?
University: _____
Country: _____

6. What degree did you receive?
( ) M.A.
( ) Ph.D.
( ) MBA

7. In what field? Please specify the field
( ) Masters in _____
( ) Ph.D. in _____
( ) MBA _____

8. What is your L1?
a) ( ) English
b) ( ) Other than English _____

9. What is your L2? _____

10. How do you rate your skills in your L2?
( ) Bilingual
( ) Very Proficient
( ) Proficient
( ) Somewhat proficient

11. Where did you learn

English _____
Spanish _____
Portuguese _____

12. Apart from English and _____, what other languages do you know? Next to each language, write one of the following words to describe your current state of knowledge: *native competence*; *proficient*; *sound*; *passive* or *basic*. (If none, skip to next question).
Language Knowledge

_____ _____
_____ _____

13. Have you ever lived in a country where your L2 is spoken?
( ) Yes (if yes, where _____ and how long ?_____)
( ) No

14. Have you taken any courses in Translation Theory?
( ) Yes (If yes, which one? _____)
( ) No

15. Have you ever worked as a translator? If so, how long?
( ) up to 2 years
( ) 2-4 years
( ) 4-6 years
( ) 6-10 years
( ) > 10 years
16. Are you a...
( ) Freelance translator
( ) Employee – Translation Agency
( ) Both

17. Is translation your main professional activity?
( ) Yes **(go to question 20)**
( ) No

18. What is your main professional activity? _____

19. What percentage of your income comes from translation tasks?
( ) up to 40%
( ) 40% - 70%
( ) more than 70%

20. What percentage of your work is done from the L2 into the L1?
( ) up to 40%
( ) from 40% to 70%
( ) more than 70%

21. Please specify the amount of translated material you have done from the L2 into the L1 in the last two (2) years?
(Please indicate on an average number of pages translated per day).
_____

22. What kind of text you translate more often?
( ) Technical
( ) Scientific
( ) Literature
( ) Other (please be specific) _____

23. Please specify the languages you translate:
a) From _____   into _____
b) From _____   into _____
c) From _____   into _____

24. What documentation resources do you use most often?
( ) bilingual dictionary
( ) monolingual dictionary
( ) technical dictionary
( ) other resources (please be specific: _____)

25. What do you think that should be prioritized when translating a text? Please rank the following in a scale from 1 to 2:
Aspect 1
( ) Solve language problems
( ) Solve problems related to text content

Aspect 2
( ) Paying attention to the meanings of the source text
( ) Paying attention to how the target text will be perceived by the target audience

Aspect 3
( ) Solving questions based on your own knowledge (Linguistic and extra Linguistics)

(   ) Solving questions through searches based on external sources (Internet, dictionaries, etc.)

26. What are, for you, the main difficulties in translating into your mother tongue?
_____
_____
_____

26. What are, for you, the main difficulties in translating into a foreign language?
_____
_____
_____

APPENDIX B - POST-TRANSLATION QUESTIONNAIRE

Please answer truthfully the following questions about the translation **from English into Spanish/Portuguese.** Circle the correct response to each question.

Survey Scale
SA = Strongly Agree
A = Agree
N = Neutral
D = Disagree
SD = Strongly Disagree

1. The translation task was easy?

SA   A   N   D   SD

2. Are you satisfied with your final product?

SA   A   N   D   SD

3. Which aspect/s of your final product are you most satisfied with and why?
_____
_____

4. Which aspect/s of your final product are you most dissatisfied with and why?

_____
_____
_____
_____

5. Did you enjoy working on this translation?

<div align="center">SA   A   N   D   SD</div>

6. Here you can write whatever additional comments you have about this translation
_____
_____
_____
_____